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**Date:** 10/16/2017

**GAIN Report Number:** IN7124

## India

**Post:** New Delhi

### Southwest Monsoon Closes Out - Lower Rainfall Shapes Yields

**Report Categories:**

Agricultural Situation

Climate Change/Global Warming/Food Security

Grain and Feed

Oilseeds and Products

Cotton and Products

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**Report Highlights:**

According to the Indian Meteorological Department (IMD), the cumulative rainfall for the Southwest Monsoon 2017 (June to September) was five percent lower than the fifty-year average and two percent lower than last year's monsoon. The first GOI advance production estimates for 2017 indicate lower production for major Kharif crops as moisture availability likely influenced optimal crop yields.

## General Information:

### Southwest Monsoon and Kharif Planting Review

The Southwest Monsoon officially ended on September 30, 2017. According to the IMD, the cumulative rainfall from June to September 2017 was five percent below the fifty-year average and two percent below last year (see Table 1). During the Southwest Monsoon 2017, seven states recorded deficient rains (i.e., greater than 11 percent departure from normal); including, Punjab, Madhya Pradesh, Uttar Pradesh, New Delhi (UT), Chandigarh (UT), Nagaland and Manipur (see Figure 1).

The rainfall in June and July indicated that most parts of the country received above normal rains (3 percent), but rainfall during August and September was below normal (12.5 percent). For more details, refer to Figure 5. The precipitation levels in the East and Northeast regions in June and the Southern Peninsula region in July were deficit, but moved above normal levels in August. The long dry spells in Central and Southern regions in August resulted in low water storage levels (see Table 2) and limited access to irrigation water.

The initial onset of the monsoon supported Kharif planting as overall planting acreage increased by three percent compared to normal area (see Table 3). In comparison to last year, the pronounced acreage increase was for cotton (19 percent) and sugarcane (9 percent), while acreage reductions occurred for oilseeds (9 percent) and pulses (4 percent). The acreage shifts occurred even though increases in minimum support prices (MSP) were designed to target specific commodities. MSP rates in MY 2017-18 for soybeans were increased by 10 percent, pulses by 6-8 percent, and cotton by 3-4 percent compared to last year. The GOI forecast year-over-year declining production estimates for rice, pulses, coarse cereals, and oilseeds in the [first advance estimates](#) of production for MY 2017/18.

### Outlook for Northeast Monsoon

The Southern India Peninsula, consisting of five agro climatic areas (Tamil Nadu, Coastal Andhra Pradesh, Rayalaseema, Kerala and south interior Karnataka), receives about 30 percent of its annual rainfall during the Northeast Monsoon which runs from October through December. Tamil Nadu in particular receives about 48 percent of its annual rainfall during this season.

The IMD forecast for the 2017 Northeast Monsoon over the Southern Peninsula is that it will be receive normal (between 89 -111 percent of the long-period average) rainfall. (NOTE: the long period average (LPA), or average for the period of 1951 to 2000, for rainfall over the area is 332.1millimeters).

IMD forecast heavy to very heavy rains for the days between October 9 to 13, in the East and Northeast as well as the Peninsula region. October rains provide moisture which supports the Rabi (winter) crop planting.

**Table 1. India: Regional Rainfall Distribution from June 1, 2017 – September 30, 2017**

Regions	2017	2016	Normal	Y-o-Y	2017 Percentage
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	Actual (mm)	Actual (mm)	(mm)*	Percentage Departure	Departure from Normal
Northwest India	552.9	584.2	615.0	-5%	-10%
Central India	918.8	1034.1	975.5	-11%	-6%
Southern Peninsula	717.6	661.5	716.1	8%	0%
East and Northeast India	1386.4	1281.5	1438.3	8%	-4%
<b>All India</b>	<b>841.3</b>	<b>862.0</b>	<b>887.5</b>	<b>-2%</b>	<b>-5%</b>

\* Normal rainfall is the fifty year average of rainfall from 1951-2000

Source: Indian Meteorological Department

**Table 2. India Storage Status at 91 Major Reservoirs on Oct 6, 2017**

Regional Water Storage Levels as Percentage of Full Reservoir Level

Region	Current Storage (in billion cubic meter)	Total Capacity (in billion cubic meter	2017	2016	10 Years Average
Northern Region	14.73	18.01	82%	75%	81%
Eastern Region	14.51	18.83	77%	85%	78%
Western Region	20.77	27.07	77%	83%	80%
Central Region	27.38	42.30	65%	91%	73%
Southern Region	28.46	51.59	55%	53%	72%
<b>All India</b>	<b>105.85</b>	<b>157.80</b>	<b>67%</b>	<b>79%</b>	<b>82%</b>

Source: Ministry of Water Resources, Government of India

States having improved water storage levels in their reservoirs as a result of the Southwest Monsoon are Himachal Pradesh, Punjab, Tripura, Uttarakhand, Karnataka, Kerala and Tamil Nadu. Maharashtra has an equal storage level in comparison with last year. States with reduced storage volumes in comparison with last year are: Rajasthan, Jharkhand, Odisha, West Bengal, Gujarat, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Andhra Pradesh and Telangana.

On September 25, 2017, the Ministry of Agriculture and Farmers Welfare published the first advance estimates of production of major Kharif crops for 2017-18. The production assessment of different crops is based on state-level feedback and is validated with information from other sources. The production estimate of most crops during the current Kharif season is higher the five-year average. However, the estimated production forecast for rice, pulses, coarse cereals, and oilseeds is lower than last year.

However, it is important to note that these are preliminary estimates which will be revised several times over the season. For more details, refer to the [First Advance Estimates of Production of Major Kharif](#)

## Crops 2017-18

**Table 3. India. Kharif 2017 Sown Area (in million hectares)**

<b>Crop</b>	<b>Area Sown in 2017 on Sep 29, 2017</b>	<b>Area Sown in 2016 on Sep 29, 2016</b>	<b>Normal Area on Sep 29**</b>	<b>Y-o-Y Change</b>	<b>Change from Normal</b>
Rice	37.908	38.237	37.656	-1%	1%
Pulses	14.201	14.747	11.697	-4%	21%
Coarse Cereals	18.680	18.978	18.295	-2%	2%
Oilseeds	17.341	19.026	18.571	-9%	-7%
Sugarcane	4.995	4.564	4.949	9%	1%
Jute and Mesta	0.708	0.757	0.793	-6%	-11%
Cotton	12.259	10.279	11.501	19%	7%
<b>Total</b>	<b>106.092</b>	<b>106.588</b>	<b>103.462</b>	<b>0%</b>	<b>3%</b>

Source: Ministry of Agriculture and Farmers Welfare, Government of India

\*\* Normal Area is the five year average of the area from 2011-2015

**Table 4. India. First Advance Estimates of Production of Major Kharif Crops for 2017-18 (in million metric tons)**

<b>Crop</b>	<b>1<sup>st</sup> Advance Estimates 2017</b>	<b>Target 2017</b>	<b>1<sup>st</sup> Advance Estimates 2016</b>	<b>4<sup>th</sup> Advance Estimates 2016</b>	<b>Final Advance Estimates 2015</b>
Rice	94.48	94.50	93.88	96.39	91.41
Pulses	8.71	8.75	8.70	9.42	5.53
Coarse Cereals	31.49	33.75	32.45	32.71	28.15
Oilseeds	20.68	25.40	23.36	22.40	16.68
Sugarcane	337.69	355.00	305.24	306.72	348.45
Jute and Mesta /1	10.33	11.80	10.41	10.60	10.52
Cotton /2	32.27	35.50	32.12	33.09	30.01

Source: Ministry of Agriculture and Farmers Welfare, Government of India

/1 in million 180 kg bales

/2 in million 170 kg bales

**Figure 1. India. Rainfall Distribution from June to September 2017 by State**



India Meteorological Department  
Hydromet Division, New Delhi

STATE-WISE RAINFALL DISTRIBUTION

		Week:28-09-2017 To 04-10-2017				Period:01-06-2017 To 30-09-2017			
S NO	MET. SUBDIVISION/UT/STATE/DISTRICT	ACTUAL (mm)	NORMAL (mm)	%DEP.	CAT.	ACTUAL (mm)	NORMAL (mm)	% DEP.	CAT.
REGION : EAST AND NORTH EAST INDIA									
1	ARUNACHAL PRADESH	94.5	70.0	35%	E	1572.3	1768.0	-11%	N
2	ASSAM	98.0	46.1	113%	LE	1471.1	1523.4	-3%	N
3	MEGHALAYA	181.5	80.9	124%	LE	2607.3	2786.8	-6%	N
4	NAGALAND	50.8	50.3	1%	N	1001.8	1329.9	-25%	D
5	MANIPUR	63.9	73.0	-12%	N	942.1	1404.5	-33%	D
6	MIZORAM	80.2	77.7	3%	N	3038.5	1708.3	78%	LE
7	TRIPURA	53.8	56.2	-4%	N	1886.0	1489.1	27%	E
8	SIKKIM	36.9	84.8	-56%	D	1997.3	1800.8	11%	N
9	WEST BENGAL	66.2	63.3	5%	N	1359.7	1390.4	-2%	N
10	JHARKHAND	44.7	37.9	18%	N	978.8	1091.9	-10%	N
11	BIHAR	25.4	38.5	-34%	D	936.8	1027.6	-9%	N
REGION : NORTH WEST INDIA									
1	UTTAR PRADESH	1.3	23.1	-94%	LD	602.5	846.1	-29%	D
2	UTTARAKHAND	2.7	24.2	-89%	LD	1199.0	1229.1	-2%	N
3	HARYANA	0.0	7.9	-99%	LD	341.9	459.8	-26%	D
4	CHANDIGARH (UT)	0.0	10.3	-100%	NR	752.8	844.2	-11%	N
5	DELHI (UT)	0.0	8.5	-100%	NR	442.6	636.2	-30%	D
6	PUNJAB	0.0	11.0	-100%	NR	384.9	491.9	-22%	D
7	HIMACHAL PRADESH	1.3	14.2	-91%	LD	720.7	825.3	-13%	N
8	JAMMU & KASHMIR	0.4	9.4	-96%	LD	545.4	534.6	2%	N
9	RAJASTHAN	0.0	4.8	-99%	LD	454.4	419.0	8%	N
REGION : CENTRAL INDIA									
1	ODISHA	48.2	36.4	32%	E	1051.7	1149.9	-9%	N
2	MADHYA PRADESH	1.6	16.7	-91%	LD	763.1	952.3	-20%	D
3	GUJARAT	0.0	11.4	-100%	NR	798.8	672.7	19%	N
4	DADAR & NAGAR HAVELI (UT)	0.0	40.8	-100%	NR	3050.7	2162.3	41%	E
5	DAMAN & DIU (UT)	0.0	28.7	-100%	NR	1960.6	1620.4	21%	E
6	GOA	72.1	71.6	1%	N	2563.6	2970.3	-14%	N
7	MAHARASHTRA	16.8	34.3	-51%	D	1006.5	1007.3	0%	N
8	CHHATTISGARH	30.0	25.2	19%	N	1039.4	1153.3	-10%	N
REGION : SOUTH PENINSULA									
1	ANDAMAN & NICOBAR (UT)	89.4	105.3	-15%	N	1526.0	1682.5	-9%	N
2	ANDHRA PRADESH	59.8	43.2	38%	E	597.0	504.4	18%	N
3	TELANGANA	57.2	32.5	76%	LE	657.4	755.2	-13%	N
4	TAMIL NADU	27.9	33.6	-17%	N	414.2	317.0	31%	E
5	PONDICHERRY (UT)	21.9	31.6	-31%	D	389.9	355.0	10%	N
6	KARNATAKA	83.1	47.9	74%	LE	796.9	832.2	-4%	N
7	KERALA	76.2	71.8	6%	N	1857.4	2039.6	-9%	N
8	LAKSHADWEEP (UT)	34.7	42.3	-18%	N	1108.3	998.5	11%	N
COUNTRY :		26.3	29.2	-3%		841.3	887.5	-5%	

CATEGORYWISE DISTRIBUTION OF NO.OF STATES

CATEGORY	Week:28-09-2017 To 04-10-2017	Period:01-06-2017 To 30-09-2017
	NO.OF STATES	NO.OF STATES
Large Excess	4	1
Excess	3	4
Normal	12	24
Deficient	4	7
Large Deficient	7	0
NoRain	6	0
NoData	0	0

**Figure 2. India. Rainfall distribution from June to September 2017 by Subdivision**



India Meteorological Department  
Hydromet Division, New Delhi

**SUBDIVISION-WISE RAINFALL DISTRIBUTION**

S NO	MET. SUBDIVISION/UT/STATE/DISTRICT	Day:30-09-2017				Period:01-06-2017 To 30-09-2017			
		ACTUAL (mm)	NORMAL (mm)	% DEP.	CAT.	ACTUAL (mm)	NORMAL (mm)	% DEP.	CAT.
	<b>REGION : EAST AND NORTH EAST INDIA</b>	<b>17.2</b>	<b>7.0</b>	<b>146%</b>		<b>1386.4</b>	<b>1438.3</b>	<b>-4%</b>	
1	ARUNACHAL PRADESH	11.1	8.4	32%	E	1572.3	1768.0	-11%	N
2	ASSAM & MEGHALAYA	43.9	6.6	565%	LE	1614.5	1792.8	-10%	N
3	N M M T	14.8	8.3	78%	LE	1870.7	1490.9	25%	E
4	SHIMB & SIKKIM	28.5	9.3	206%	LE	2039.8	2006.2	2%	N
5	GANGETIC WEST BENGAL	13.8	9.6	44%	E	1133.0	1167.9	-3%	N
6	JHARKHAND	9.0	5.2	74%	LE	978.8	1091.9	-10%	N
7	BIHAR	1.9	4.1	-53%	D	936.8	1027.6	-9%	N
	<b>REGION : NORTH WEST INDIA</b>	<b>0.1</b>	<b>1.4</b>	<b>-93%</b>		<b>552.9</b>	<b>615.0</b>	<b>-10%</b>	
1	EAST UTTAR PRADESH	0.6	2.9	-81%	LD	648.4	897.6	-28%	D
2	WEST UTTAR PRADESH	0.0	1.7	-100%	NR	531.1	769.4	-31%	D
3	UTTARAKHAND	0.4	2.3	-84%	LD	1199.0	1229.1	-2%	N
4	HAR. CHD & DELHI	0.0	0.9	-100%	NR	345.8	406.3	-20%	D
5	PUNJAB	0.0	1.6	-100%	NR	384.9	491.9	-22%	D
6	HIMACHAL PRADESH	0.0	1.8	-100%	NR	720.7	825.3	-13%	N
7	JAMMU & KASHMIR	0.0	1.1	-100%	NR	545.4	534.6	2%	N
8	WEST RAJASTHAN	0.0	0.3	-100%	NR	365.6	263.2	39%	E
9	EAST RAJASTHAN	0.0	1.0	-100%	NR	566.1	615.8	-8%	N
	<b>REGION : CENTRAL INDIA</b>	<b>2.7</b>	<b>3.5</b>	<b>-22%</b>		<b>918.8</b>	<b>975.5</b>	<b>-6%</b>	
1	ODISHA	6.3	5.4	17%	N	1051.7	1149.9	-9%	N
2	WEST MADHYA PRADESH	0.0	2.5	-100%	NR	738.0	876.1	-16%	N
3	EAST MADHYA PRADESH	0.0	1.9	-100%	NR	795.8	1051.2	-24%	D
4	GUJARAT REGION	0.0	3.3	-100%	NR	995.3	914.7	9%	N
5	SALURASHTRA & KUTCH	0.0	1.3	-100%	NR	646.3	477.5	35%	E
6	KONKAN & GOA	17.4	9.5	83%	LE	3206.0	2914.7	10%	N
7	MADHYA MAHARASHTRA	4.8	5.4	-10%	N	852.5	729.3	17%	N
8	MARATHWADA	0.2	4.0	-96%	LD	642.4	682.9	-6%	N
9	VIDARSHA	0.6	2.6	-78%	LD	731.5	954.6	-23%	D
10	CHHATTISGARH	6.0	3.3	83%	LE	1039.4	1153.3	-10%	N
	<b>REGION : SOUTH PENINSULA</b>	<b>6.8</b>	<b>6.1</b>	<b>11%</b>		<b>717.6</b>	<b>716.1</b>	<b>0%</b>	
1	A & N ISLAND	11.9	13.7	-13%	N	1526.0	1682.5	-9%	N
2	COASTAL ANDHRA PRADESH	7.9	6.2	27%	E	662.8	581.1	14%	N
3	TELANGANA	11.8	4.5	162%	LE	657.4	755.2	-13%	N
4	RAYALASEEMA	2.8	6.3	-55%	D	506.1	398.3	27%	E
5	TAMILNADU & PONDICHERY	0.9	4.5	-81%	LD	414.1	317.2	31%	E
6	COASTAL KARNATAKA	7.0	11.2	-37%	D	2596.3	3083.8	-16%	N
7	N. I. KARNATAKA	9.6	6.3	52%	E	522.9	506.0	3%	N
8	S. I. KARNATAKA	7.6	6.3	20%	E	670.3	680.0	2%	N
9	KERALA	7.6	9.8	-23%	D	1857.4	2039.6	-9%	N
10	LAKSHADWEEP	2.7	5.3	-48%	D	1108.3	998.5	11%	N
	<b>COUNTRY :</b>	<b>5.0</b>	<b>3.9</b>	<b>29%</b>		<b>841.3</b>	<b>887.5</b>	<b>-5%</b>	

**CATEGORYWISE NO.OF SUBDIVISIONS AND % AREA(SUBDIVISIONAL)OF THE COUNTRY**

CATEGORY	Day:30-09-2017		Period:01-06-2017 To 30-09-2017	
	NO.OF SUBDIVISIONS	SUBDIVISIONAL %AREA OF COUNTRY	NO.OF SUBDIVISIONS	SUBDIVISIONAL %AREA OF COUNTRY
Large Excess	7	17%	0	0%
Excess	5	13%	5	18%
Normal	3	8%	25	65%
Deficient	5	7%	6	17%
Large Deficient	5	15%	0	0%
NoRain	11	40%	0	0%

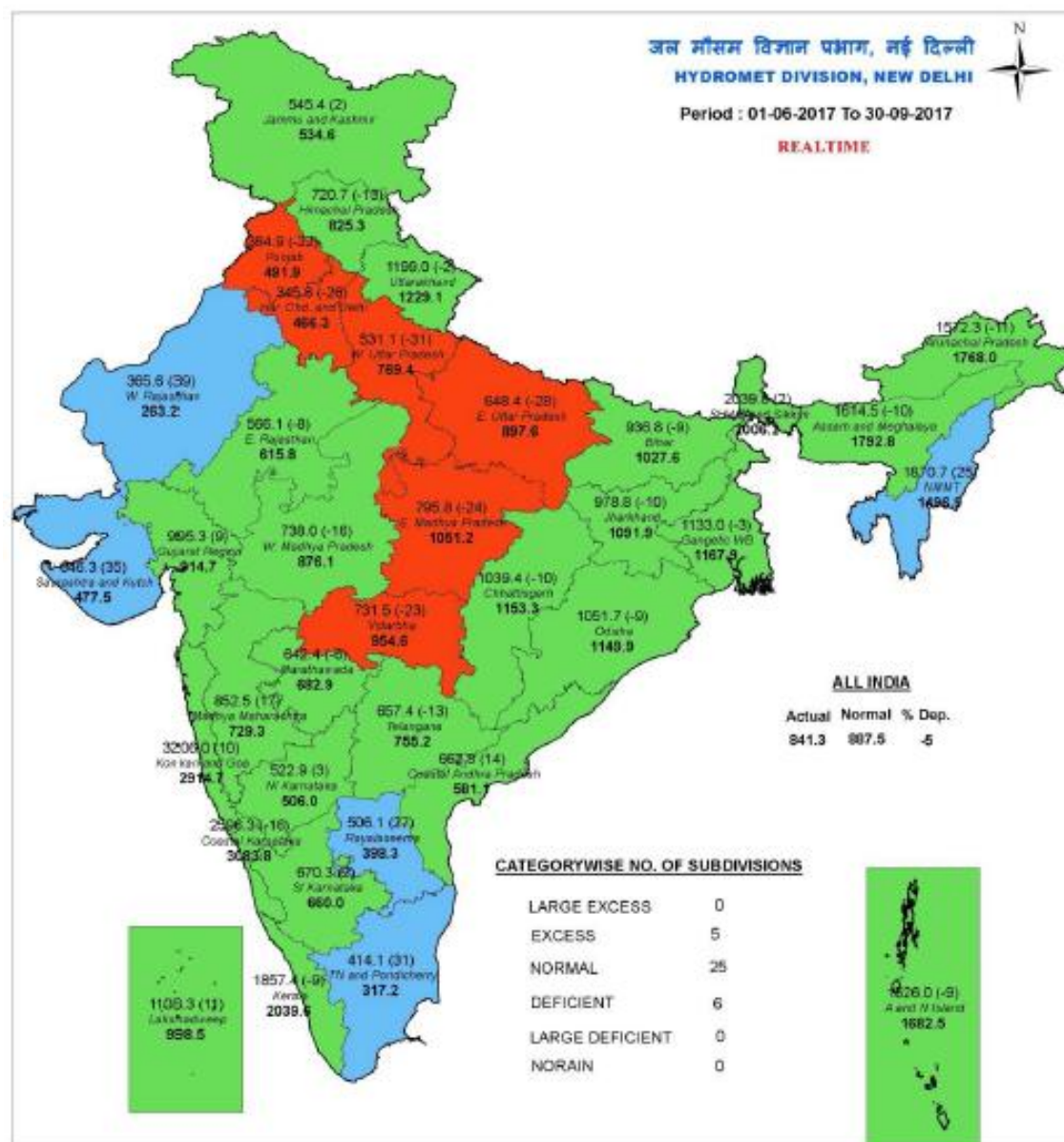


Figure 3. India. Subdivision Rainfall Map for June to September 2017



भारत मौसम विज्ञान विभाग  
INDIA METEOROLOGICAL DEPARTMENT

**SUBDIVISION RAINFALL MAP**



**Figure 4. India. Actual and Cumulative Rainfall over four Homogeneous Regions From June to September, 2017**

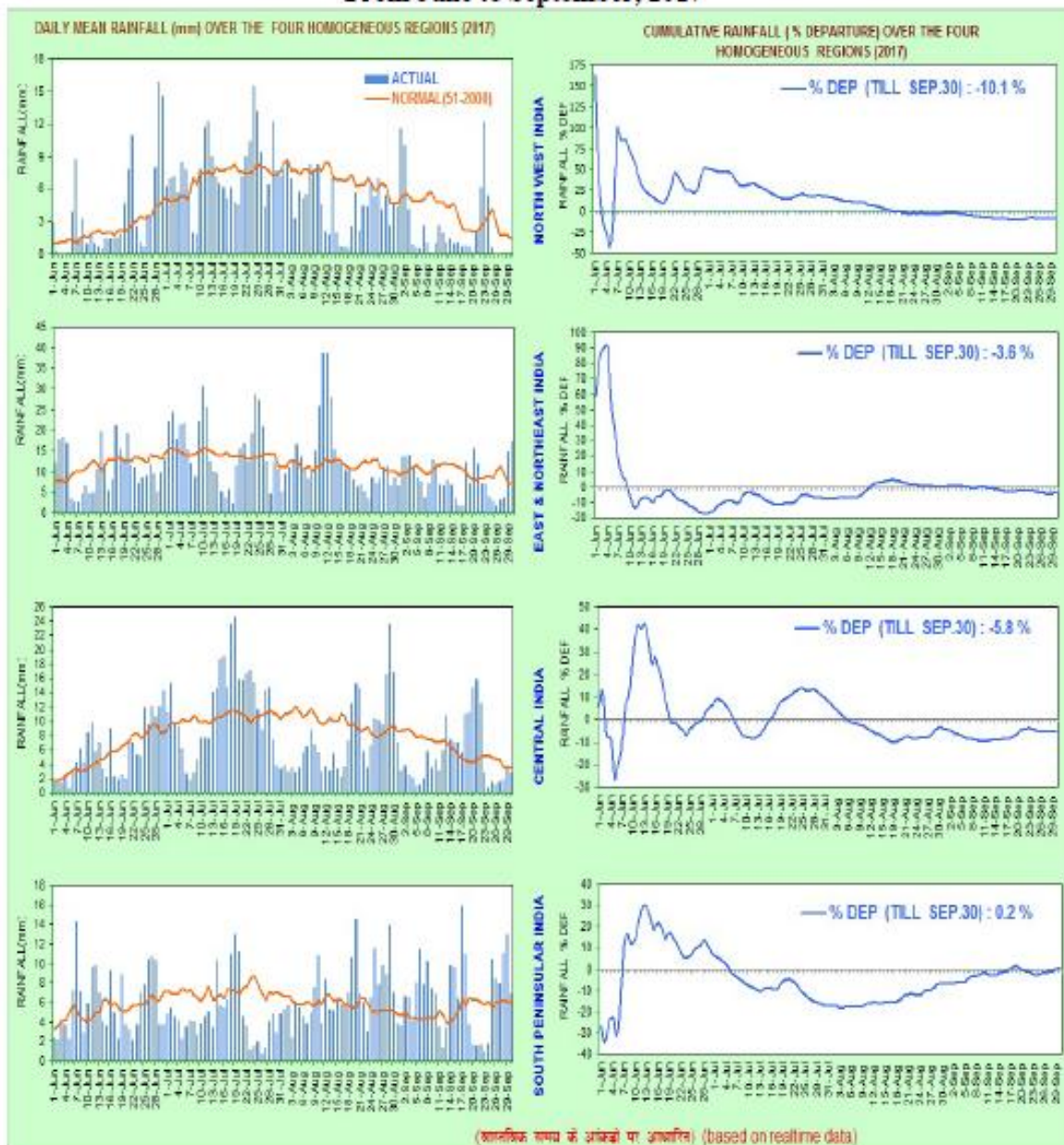




Figure 5. India. Rainfall Statistics – Southwest Monsoon 2017

### RAINFALL STATISTICS - MONSOON 2017

JUNE - 2017			
REGION	ACTUAL	NORMAL	% DEP
COUNTRY AS A WHOLE	170.2	163.6	4.0
NORTHWEST INDIA	104.8	69.1	52
EAST & NORTHEAST INDIA	288.1	349.9	-18
CENTRAL INDIA	173.0	164.3	5
SOUTH PENINSULA	172.0	158.9	8

JULY - 2017			
REGION	ACTUAL	NORMAL	% DEP
COUNTRY AS A WHOLE	294.0	289.2	1.7
NORTHWEST INDIA	232.8	218.2	7
EAST & NORTHEAST INDIA	464.0	436.7	6
CENTRAL INDIA	359.0	324.8	11
SOUTH PENINSULA	140.7	219.9	-36

AUGUST - 2017			
REGION	ACTUAL	NORMAL	% DEP
COUNTRY AS A WHOLE	228.1	261.3	-12.7
NORTHWEST INDIA	144.8	215.6	-33
EAST & NORTHEAST INDIA	406.9	355.1	15
CENTRAL INDIA	230.7	305.0	-24
SOUTH PENINSULA	209.1	180.7	16

SEPTEMBER - 2017			
REGION	ACTUAL	NORMAL	% DEP
COUNTRY AS A WHOLE	152.4	173.7	-12
NORTHWEST INDIA	70.6	111.9	-37
EAST & NORTHEAST INDIA	13.5	296.4	-16
CENTRAL INDIA	156.2	181.9	-14
SOUTH PENINSULA	196.4	156.6	25

JULY + AUGUST 2017 CUMULATIVE			
REGION	ACTUAL	NORMAL	% DEP
COUNTRY AS A WHOLE	522.2	550.5	-5.1
NORTHWEST INDIA	377.6	433.8	-13
EAST & NORTHEAST INDIA	870.9	791.8	10
CENTRAL INDIA	589.7	629.8	-6
SOUTH PENINSULA	349.8	400.6	-13

AUGUST + SEPT 2017 CUMULATIVE			
REGION	ACTUAL	NORMAL	% DEP
COUNTRY AS A WHOLE	380.5	435.0	-12.5
NORTHWEST INDIA	215.4	327.5	-34
EAST & NORTHEAST INDIA	420.4	651.5	-35
CENTRAL INDIA	386.9	486.9	-21
SOUTH PENINSULA	405.5	337.3	20

CUMULATIVE SEASONAL RAINFALL			
REGION	ACTUAL	NORMAL	% DEP
COUNTRY AS A WHOLE	841.3	887.5	-5.2
NORTHWEST INDIA	552.9	615.0	-10
EAST & NORTHEAST INDIA	1386.4	1438.3	-4
CENTRAL INDIA	918.8	975.5	-6
SOUTH PENINSULA	717.6	716.1	0

(Based on real time data)

